

REMARKS

Claims 15-18 remain pending in this application, claims 1-14 and 19 having been cancelled by the above amendment. Of these claims, claims 1, 2, 4, 7-10 and 14-17 stand rejected under 35 USC §102(b) as being anticipated by Yen et al.; claims 1, 4, 6-9, 12 and 14 stand rejected under 35 USC §102(b) as being anticipated by, or in the alternative, under 35 USC §103(a) as being obvious over Dhar '863; claims 1-4, 6-12 and 14 stand rejected under 35 USC §102(b) as being anticipated by, or in the alternative, under 35 USC §103(a) as being obvious Dhar '020; claims 15-19 stand rejected under 35 USC §103(a) as being unpatentable over Dhar '020 in view of Yen et al.; and claims 5 and 13 stand rejected under 35 USC §103(a) as being unpatentable over Dhar '863. Also, claims 3 and 11 stand rejected under 35 USC §112, second paragraph, as being indefinite because of use of the trademark Teflon. The Abstract of the Disclosure is objected to because of the acronym CCDM.

In view of the preceding amendments and the following remarks, these rejections are traversed, and reconsideration of this application is respectfully requested.

By the above amendment, the Abstract of the Disclosure has been amended to state that CCDM stands for catalyst-coated diffusion media. It is therefore respectfully requested that the objection to the Abstract be withdrawn.

Claims 3 and 11 have been cancelled by the above amendment, rendering the §112, second paragraph, rejection moot. It is therefore respectfully requested that this rejection be withdrawn.

By the above amendment, claims 1-14 and 19 have been cancelled and independent method claim 15 has been extensively amended. Independent claim 15

now states that the MEA includes both a cathode side and an anode side that are positioned at opposite sides of the membrane, where the fuel cell is operated to form the diffusion media layers to the membrane. By fabricating the MEA in this manner, the diffusion media layers do not need to be bonded or hot-pressed to the membrane prior to the MEA being assembled as part of a fuel cell stack. Support for this can be found in paragraphs [0023] and [0026] of the Specification that discuss the advantage of eliminating the hot-press step or the bonding step to increase the lifetime of the MEA and the fuel cell stack.

Applicant respectfully submits that the methods for fabricating MEAs taught by Yen et al., Dhar '963 and Dhar '020 all require a bonding or hot-pressing step of the diffusion media layer combination to the membrane. Particularly, Yen et al. states in column 6, lines 65 – 67 that the sintered electrode is bonded to the electrolyte membrane using the above-described methods. The described methods include bonding the membrane to the electrodes using hot-pressing (column 6, lines 24 – 29). Further, column 7, line 8, also states that the electrode is bonded to the electrolyte membrane. All of the examples in Yen et al. discuss the hot-pressing step.

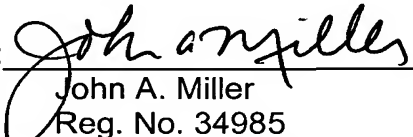
Dhar '863 talks about fabricating the fuel cell assembly 50 of figures 5 where the components of the fuel cell assembly 50 are combined together to make a single unit by inserting them between two platens of a press that is preheated to about 135°C (column 9, lines 41 – 46). Column 11, line 34 – 37 talks about assembling the fuel cell assembly 70 of figure 6 in the same manner as the fuel cell assembly 50. Dhar '020 also discusses fabricating the MEA assembly by putting it together and pressing under high heat (column 4, lines 36 – 40).

Applicant respectfully submits that the prior art of record only teaches fabricating an MEA using a bonding and hot-pressing step prior to operation of the fuel

cell. Applicant's independent claim 15 now states that the operation of the fuel cell causes the diffusion media layers to form to the membrane, where the diffusion media layers are not bonded to the membrane prior to operating the fuel cell. Therefore, Applicant submits that the prior art of record does not anticipate or make obvious Applicant's independent claim 15 as now more particularly claimed. It is therefore respectfully requested that the §102 and §103 rejections be withdrawn.

It is now believed that this application is in condition for allowance. If the Examiner believes that personal contact with Applicant's representative would expedite prosecution of this application, she is invited to call the undersigned at her convenience.

Respectfully submitted,

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